

REMARKS

Claims 1 - 30 are pending in the above-identified application. Claims 5, 8, 11 - 26 and 28 - 30 are withdrawn from consideration.

In the Office Action of October 29, 2003, Claims 1 - 4, 6, 7, 9, 10 and 27 were rejected. No claim was allowed. In response, Claims 6 and 7 are canceled, Claims 1, 10 and 11 are amended and new Claim 31 is added to the application.

Reexamination and reconsideration are respectfully requested in view of the foregoing amendments and the following remarks.

Rejection of Claims 1 - 4, 6 - 7, 9 - 10 and 27 under 35 U.S.C. 112, second paragraph as indefinite

Claims 1 - 4 and 6 - 7, 9 - 10 and 27 were rejected under 35 U.S.C. 112, second paragraph as indefinite. In response, the claims are amended to overcome this rejection.

In particular, regarding Claim 1, the phrase "their derivatives and their salts" is amended as "their derivatives or their salts" thereby clarifying that these are alternatives. The entire part (c) of the claim relating to the combustion modifier is deleted.

Regarding Claim 6, this claim is canceled.

Accordingly, it is respectfully submitted that all of the rejections under 35 U.S.C. 112, second paragraph, are thereby overcome.

Rejection of Claims 1 - 4, 6 - 7, 9 - 10 and 27 under 35 U.S.C. 103(a) over Blau et al, Lund et al '059, Wardle et al, Highsmith et al, Yoshida et al '446 and

Redecker '485

Claims 1 - 4 and 6 - 7, 9 - 10 and 27 under 35 U.S.C. 103(a) were rejected as obvious over Blau et al, Lund et al '059, Wardle et al, Highsmith et al, Yoshida et al '446 and Redecker.

This rejection is traversed as it may apply to the claims as amended herein. In particular, independent Claim 1 is amended to require three oxidants, and to specifically name two of the oxidants, zinc peroxide and potassium perchlorate, the third oxidant being a nitrate. Thus, Claim 1 is more specifically directed to the embodiments set forth in Examples 1 to 5 of the application.

It is respectfully submitted that a gas-generating composition having all three of zinc peroxide and potassium perchlorate and a nitrate is neither taught nor suggested by the cited references. The astonishing and unexpected effect of using the three named oxidants together is shown in the specification in Examples 1 to 5. For example, while a binary mixture of oxidants yields a high proportion of CO, the addition of only 1 % wt of zinc peroxide surprisingly leads to a significant reduction in the amount of CO. This effect is not a matter of mere optimization of variables, as alleged by the Examiner, since there is nothing in the cited art that would guide a person skilled in the art select these particular oxidants out of the huge number of possible oxidants, to achieve this effect.

Accordingly, it is respectfully submitted that Claims 1 - 4 and 6 - 7, 9 - 10 and 27, as amended, would not have been obvious over Blau et al, Lund et al '059, Wardle et al, Highsmith et al, Yoshida et al '446 and Redecker '485.

Rejection of Claims 1 - 4, 6 - 7, 9 - 10 and 27 under 35 U.S.C. 112, first paragraph

Claims 1 - 4 and 6 - 7, 9 - 10 and 27 were rejected under 35 U.S.C. 112, first paragraph, as allegedly containing subject matter that is not described in the specification so as enable a person skilled in the art. In response, as discussed above, independent Claim 1 is amended to define the composition with greater specificity, as supported by Examples 1 to 5. Accordingly, it is respectfully submitted that the rejection under 35 U.S.C. 112, first paragraph, is thereby overcome.

Rejection of Claims 1 - 4, 6 - 7, 9 - 10 and 27 under the judicially created doctrine of obviousness-type double patenting over Claims 1 - 15, 18 and 19 of U.S. Patent No. 6,453,816

Claims 1 - 4, 6 - 7, 9 - 10 and 27 under the judicially created doctrine of obviousness-type double patenting over Claims 1 - 15, 18 and 19 of U.S. Patent No. 6,453,816. This rejection is traversed. As discussed above, independent Claim 1 is amended to require three oxidants, and to specifically name two of the oxidants, zinc peroxide and potassium perchlorate, the third oxidant being a nitrate. Thus, Claim 1 is more specifically directed to the embodiments set forth in Examples 1 to 5 of the application. A gas-generating composition requiring all three of zinc peroxide and potassium perchlorate and a nitrate is neither taught nor suggested by Claims 1 - 15, 18 and 19 of U.S. Patent No. 6,453,816.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted


that Claims 1 - 4, 9 - 11, 14 and 28 - 29 are in condition for allowance. Favorable reconsideration is respectfully requested.

Should the Examiner believe that anything further is necessary to place this application in condition for allowance, the Examiner is requested to contact applicants' undersigned attorney at the telephone number listed below.

Kindly charge any additional fees due, or credit overpayment of fees, to Deposit Account No. 01-2135 (306.35565X00).

Respectfully submitted,

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1. (Four times Amended) Gas-producing composition for gas generators, wherein said gas-producing composition comprises,

a) as fuel, at least one nitrogen-containing compound selected from the group consisting of tetrazole, triazole, triazine, cyanic acid, urea, and their derivatives or their salts;

b) ~~at least three oxidant compounds including at least one representative each from three of the four groups consisting of peroxides, nitrates, chlorates and perchlorates; and~~ as oxidant, a combination of zinc peroxide, potassium perchlorate and at least one nitrate.

c) ~~at least one combustion moderator selected from substances that influence the combustion and its rate by heterogeneous or homogeneous catalysis.~~

10. (Three times amended) Gas-producing composition according to Claim 1, wherein the composition further contains a combustion moderator ~~is present~~ in an amount up to 8%.

11. (Three times amended) Gas-producing composition according to Claim 1, wherein the composition further contains a combustion moderator ~~is~~ selected from the group consisting of metals, metal oxides, metal carbonates, metal sulphides and mixtures thereof.